

GEOGRAPHIC INFORMATION SYSTEMS (GIS) SPECIALIST

PURPOSE: To provide technical support and maintain the functions of the City of Duluth's Geographic Information System (GIS) operations.

Functional areas:

1. Perform complex GIS analysis using spatial data.
 - * A. Incorporate various formats of spatial data into GIS database.
 - * B. Develop automated editing tools to enhance GIS data updating, analysis and retrieval procedures.
 - * C. Verify data integrity of new and existing GIS data.
 - * D. Ensure data integrity of relational databases containing GIS data.
 - * E. Assist in the maintenance, installation and upgrading of GIS hardware and software.
 - * F. Assist with the development of GIS standards and procedures.
 - * G. Provide GIS assistance and training to City of Duluth staff.
 - * H. Plan, assign, and review GIS projects and operations of assigned staff.
 - * I. Act as a liaison to other departments, staff and outside agencies in the area of GIS data availability and use.
 - J. Perform related duties as assigned.
2. When assigned, organize and direct the activities of personnel.
 - * A. Determine priorities, assign work to personnel, and coordinate schedules to ensure completion of work.
 - * B. Assist in the hire, transfer, suspension or discharge of assigned personnel.
 - * C. Establish work standards and evaluate the work of employees.
 - * D. Monitor work sites to ensure compliance with established methods, guidelines, and procedures.
 - * E. Train personnel in correct and safe operating procedures.
 - * F. Recommend adjustments or other actions in employee grievances.
 - * G. Disseminate instructions to employees through bulletins and other communications.

JOB REQUIREMENTS

Education & Experience Requirements:

- A. Minimum of a Bachelor's Degree in Geographic Information Systems (GIS), Geography, Surveying, Cartography, Computer Science or related field of study with course work in mapping, surveying, computer science and spatial analysis, AND a minimum of three years of GIS work experience (experience with ESRI products preferred), OR five years of verifiable work experience at a journey-level GIS technician position, OR equivalent combination of verifiable education and experience which demonstrates possession of the knowledge, skills and abilities listed below.

Knowledge Requirements:

- † A. Extensive knowledge of computerized mapping technology and software as it relates to GIS database management and GIS analysis and map production.
- † B. Knowledge of database management, software programming and network management.
- † C. Knowledge of various computer programming languages (C++, Visual Basic, Arc Macro Language) and operating systems (various versions of Windows, Linux, Unix).

- † D. Knowledge in the use of various computer peripherals and data acquisition and output devices such as printers, scanners, plotters, digitizers, GPS equipment etc.
- † E. Knowledge of surveying techniques and methods.
- † F. Knowledge of mathematics as it applies to GIS including Algebra, Geometry and Trigonometry.

Skill Requirements:

- † A. Skill in supervising personnel assigned to GIS staff.
- † B. Skill in using various computer peripherals such as printers, scanners, plotters, digitizers, GPS equipment etc.
- † C. Skill in effectively communicating and maintaining working relationships with employees of the City of Duluth, other agencies and the general public.
- D. Skill in preparing written materials such as procedures, policies, plans and recommendations.

Ability Requirements:

- † A. Ability to research, analyze and solve problems.
- † B. Ability to communicate on a one-to-one basis and before groups for the purpose of obtaining and providing information.
- † C. Ability to understand and carry out written and verbal instructions.
- † D. Ability to occasionally lift objects up to 50 pounds.
- † E. Ability to occasionally bend, kneel, stoop, crouch or crawl while installing hardware and software.
- † F. Ability to work at a computer for extended periods.
- † G. Ability to attend work on a regular basis.
- * Essential functions of the job
- † Job requirements necessary on the first day of employment.

HR: CT	Union: Basic	EEOC: Professionals	CSB: 20011204	Class No: 3213
WC: 8810	Pay: 133A-136E†	EEOF: Admin/Finance	CC: 20020422	Resolution: 02-0248R

‡ **Geographic Information Systems Specialist** Pay Ranges

Pay Range	Qualifications Required
Range 133, step A	with less than 6 months service in such position
Range 133, step B	with not less than six months service in such position
Range 133, step C	with not less than 12 months at step B and with satisfactory service for the preceding 12 months
Range 133, step D	with not less than 12 months at step C and with satisfactory service for the preceding 12 months
Range 133, step E	with not less than 12 months at step D and with satisfactory service for the preceding 12 months and completion of an applicable course in GIS development discipline. This course could include a professional vendor or third-party training, vocational training, or college-level course. Examples of applicable course training might include C++, Java, ESRI applications or utilities, Oracle database administration. Course must be approved by MIS Manager.
Range 134, step E	with not less than 12 months at Range 133 step E and with satisfactory service for the preceding 12 months and completion of an applicable course in GIS development discipline. This course could include a professional vendor or third-party training, vocational training, or college-level course. Examples of applicable course training might include C++, Java, ESRI applications or utilities, Oracle database administration. Course must be approved by MIS Manager.
Range 135, step E	with not less than 12 months at Range 134 step E and with satisfactory service for the preceding 12 months and completion of an applicable course in GIS development discipline. This course could include a professional vendor or third-party training, vocational training, or college-level course. Examples of applicable course training might include C++, Java, ESRI applications or utilities, Oracle database administration. Course must be approved by MIS Manager.
Range 136, step E	with not less than 12 months at Range 135 step E and with satisfactory service for the preceding 12 months and completion of an applicable course in GIS development discipline. This course could include a professional vendor or third-party training, vocational training, or college-level course. Examples of applicable course training might include C++, Java, ESRI applications or utilities, Oracle database administration. Course must be approved by MIS Manager.
Satisfactory service will be the determination of the Manager, MIS. Incumbents who disagree with the Manager's determination may grieve it in accordance with Article 45 of this agreement.	